## Claims

What is claimed is:

1. A method of radially expanding and plastically deforming a first tube having first threads, and a second tube having second threads, comprising:

    coupling a first insert to the first threads;

    coupling the first threads to the second threads to form a threaded connection;

    heating the threaded connection sufficiently to melt at least a portion of the first insert;

    allowing the melted portion of the first insert to flow and solidify within the threaded connection; and

    radially expanding and plastically deforming the coupled first and second tubes.

2. The method of claim 1, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

3. The method of claim 1, wherein the first insert comprises an outer layer of flux.

4. The method of claim 1, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first material has a higher melting point than the second material.

5. The method of claim 4, wherein the outer layer of the second material comprises an outer layer of flux.

6. The method of claim 4, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

7. The method of claim 1, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

8. The method of claim 1, further comprising applying a flux to the first and second threads of the first and second tubes.

9. The method of claim 1, wherein the first insert comprises a ring.

10. The method of claim 1, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

11. The method of claim 10, wherein the preexisting structure comprises a wellbore casing.

12. The method of claim 10, wherein the preexisting structure comprises a pipeline.

13. The method of claim 10, wherein the preexisting structure comprises a structural support.

14. The method of any of claims 1-13, further comprising, after coupling a first insert to the

first threads, coupling a second insert to the second threads.

15. An expandable tubular liner comprising a first tube having first threads, and a second tube having second threads coupled to the first threads; wherein the first threads are coupled to the second threads by the process of:

coupling a first insert to the first threads;

coupling the first threads to the second threads;

heating the first insert sufficiently to melt at least a portion of the first insert; and

cooling the melted portion of the first insert.

16. The liner of claim 15, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

17. The liner of claim 15, wherein the first insert comprises an outer layer of flux.

18. The liner of claim 15, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first material has a higher melting point than the second material.

19. The liner of claim 18, wherein the outer layer of the second material comprises an outer layer of flux.

20. The liner of claim 18, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

21. The liner of claim 15, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

22. The liner of claim 15, further comprising applying a flux to the first and second threads.

23. The liner of claim 15, wherein the first insert comprises a ring.

24. The liner of any of claims 15-23, further comprising, after coupling a first insert to the first threads, coupling a second insert to the second threads.

25. An apparatus comprising a preexisting structure coupled to a tubular liner, the tubular liner comprising a first tube including first threads, and a second tube including second threads, wherein the tubular liner is coupled to the preexisting structure by the process of:

coupling a first insert to the first threads;

coupling the first threads to the second threads to form a threaded connection;

heating the threaded connection sufficiently to melt at least a portion of the first insert;

allowing the melted portion of the first insert to flow and solidify within the threaded connection;

positioning the coupled first and second tubes within a preexisting structure; and

radially expanding the coupled first and second tubes into contact with the preexisting structure.

26. The apparatus of claim 25, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

27. The apparatus of claim 25, wherein the first insert comprises an outer layer of flux.

28. The apparatus of claim 25, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first material has a higher melting point than the second material.

29. The apparatus of claim 28, wherein the outer layer of the second material comprises an outer layer of flux.

30. The apparatus of claim 28, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

31. The apparatus of claim 25, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

32. The apparatus of claim 25, further comprising applying a flux to the first and second threads.

33. The apparatus of claim 25, wherein the first insert comprises a ring.

34. The apparatus of claim 25, wherein the preexisting structure comprises a wellbore casing.

35. The apparatus of claim 25, wherein the preexisting structure comprises a pipeline.

36. The apparatus of claim 25, wherein the preexisting structure comprises a structural support.

37. The apparatus of any of claims 25-36, further comprising, after the step of coupling a first insert to the first threads, the step of coupling a second insert to the second threads.

38. A method of radially expanding and plastically deforming a first tube having first threads, and a second tube having second threads, comprising:

coupling a first insert to the first threads;

coupling the first threads to the second threads to form a threaded connection;

radially expanding and plastically deforming the coupled first and second tubes and forming a metallurgical bond between the first insert and at least one of the first and second tubes.

39. The method of claim 38, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

40. The method of claim 38, wherein the first insert comprises an outer layer of flux.

41. The method of claim 38, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first

material has a higher energy point at which an energy input will cause a metallurgical reaction than the second material.

42. The method of claim 41, wherein the outer layer of the second material comprises an outer layer of flux.

43. The method of claim 41, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

44. The method of claim 38, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

45. The method of claim 38, further comprising applying a flux to the first and second threads of the first and second tubes.

46. The method of claim 38, wherein the first insert comprises a ring.

47. The method of claim 38, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

48. The method of claim 47, wherein the preexisting structure comprises a wellbore casing.

49. The method of claim 47, wherein the preexisting structure comprises a pipeline.

50. The method of claim 47, wherein the preexisting structure comprises a structural support.

51. The method of any of claims 38-50, further comprising, after coupling a first insert to the first threads, coupling a second insert to the second threads.

52. An expandable tubular liner comprising a first tube having first threads, and a second tube having second threads coupled to the first threads; wherein the first threads are metallurgically bonded to the second threads by the process of:

coupling a first insert to the first threads;

coupling the first threads to the second threads; and

radially expanding and plastically deforming the coupled first and second tubes.

53. The liner of claim 52, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

54. The liner of claim 52, wherein the first insert comprises an outer layer of flux.

55. The liner of claim 52, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first material has a higher energy point at which an energy input will cause a metallurgical reaction than the second material.

56. The liner of claim 55, wherein the outer layer of the second material comprises an outer layer of flux.

57. The liner of claim 55, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

58. The liner of claim 52, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

59. The liner of claim 52, further comprising applying a flux to the first and second threads.

60. The liner of claim 52, wherein the first insert comprises a ring.

61. The liner of any of claims 52-60, further comprising, after coupling a first insert to the first threads, coupling a second insert to the second threads.

62. An apparatus comprising a preexisting structure coupled to a tubular liner, the tubular liner comprising a first tube including first threads, and a second tube including second threads, wherein the tubular liner is coupled to the preexisting structure by the process of:

coupling a first insert to the first threads;

coupling the first threads to the second threads to form a threaded connection; and

radially expanding the coupled first and second tubes into contact with the preexisting structure and forming a metallurgical bond between the first insert and at least one of the first and second tubes.

63. The apparatus of claim 62, wherein coupling the first insert to the first threads comprises placing the first insert within a portion of the first threads.

64. The apparatus of claim 62, wherein the first insert comprises an outer layer of flux.

65. The apparatus of claim 62, wherein the first insert comprises an inner core comprised of a first material, and an outer layer comprised of a second material, and wherein the first material has a higher energy point at which an energy input will cause a metallurgical reaction than the second material.

66. The apparatus of claim 65, wherein the outer layer of the second material comprises an outer layer of flux.

67. The apparatus of claim 65, wherein the first material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze; and wherein the second material is selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

68. The apparatus of claim 62, wherein the first insert is fabricated from materials selected from the group consisting of aluminum, indium, bismuth, cadmium, lead, tin, brass, and bronze.

69. The apparatus of claim 62, further comprising applying a flux to the first and second

threads.

70. The apparatus of claim 62, wherein the first insert comprises a ring.

71. The apparatus of claim 62, wherein the preexisting structure comprises a wellbore casing.

72. The apparatus of claim 62, wherein the preexisting structure comprises a pipeline.

73. The apparatus of claim 62, wherein the preexisting structure comprises a structural support.

74. The apparatus of any of claims 62-73, further comprising, after the step of coupling a first insert to the first threads, the step of coupling a second insert to the second threads.

75. A method of radially expanding and plastically deforming a first tube, a second tube, and a mechanical connection for coupling the first and second tubes, comprising:

coupling an insert to at least one of the first and second tubes;

coupling the first and second tubes together using the mechanical connection;

radially expanding and plastically deforming the coupled first and second tubes; and

forming a metallurgical bond between the insert and at least one of the first and second tubes by injecting energy into the insert prior to or during the radial expansion and plastic deformation of the first and second tubes.

76. The method of claim 75, wherein the injected energy comprises thermal energy.

77. The method of claim 75, wherein the injected energy comprises mechanical energy.

78. The method of claim 75, wherein the injected energy comprises electrical energy.

79. The method of claim 75, wherein the injected energy comprises magnetic energy.

80. The method of claim 75, wherein the injected energy comprises electromagnetic energy.

81. The method of claim 75, wherein the injected energy comprises acoustic energy.

82. The method of claim 75, wherein the injected energy comprises vibrational energy.

83. A method of radially expanding and plastically deforming a first tube, a second tube, and a mechanical connection for coupling the first and second tubes, comprising:

coupling an insert to at least one of the first and second tubes;

coupling the first and second tubes together using the mechanical connection;

radially expanding and plastically deforming the coupled first and second tubes; and

forming a metallurgical bond between the insert and at least one of the first and second tubes by injecting energy into the insert prior to and during the radial expansion and plastic deformation of the first and second tubes.

84. The method of claim 83, wherein the injected energy comprises thermal and mechanical energy.

85. The method of claim 83, wherein the injected energy comprises thermal and electrical energy.

86. The method of claim 83, wherein the injected energy comprises thermal and magnetic energy.

87. The method of claim 83, wherein the injected energy comprises thermal and electromagnetic energy.

88. The method of claim 83, wherein the injected energy comprises thermal and acoustic energy.

89. The method of claim 83, wherein the injected energy comprises thermal and vibrational energy.

90. A tubular assembly, comprising:
a first tube;
a second tube;
a mechanical connection for coupling the first and second tubes; and
a metallurgical connection for coupling the first and second tubes;
wherein the metallurgical connection is provided proximate the mechanical connection.

91. A tubular assembly, comprising:
a first tube;
a second tube;
a mechanical connection for coupling the first and second tubes; and
a metallurgical connection for coupling an external tubular surface of the first tube to an internal tubular surface of the second tube.

92. A tubular assembly, comprising:
a first tube;
a second tube;
a mechanical connection for coupling the first and second tubes; and
a metallurgical connection for coupling an external surface of the first tube to an internal surface of the second tube;
wherein the metallurgical connection is positioned within the mechanical connection.

93. A tubular assembly, comprising:
a first tube;
a second tube;
a threaded connection for coupling the first and second tubes; and
a metallurgical connection for coupling an external surface of the first tube to an internal surface of the second tube;
wherein the metallurgical connection is positioned within the threaded connection.

94. A cold-weldable insert for forming a metallurgical bond between overlapping threaded ends of adjacent tubular members, comprising:
a tapered tubular member comprising one or more threaded portions for engaging the

threaded ends of the adjacent tubular members;

wherein the tapered tubular member is fabricated from one or more materials capable of forming a metallurgical bond with at least one of the adjacent tubular members when energy is input into the tapered tubular member.

95. The insert of claim 94, wherein the injected energy comprises thermal energy.

96. The insert of claim 94, wherein the injected energy comprises mechanical energy.

97. The insert of claim 94, wherein the injected energy comprises electrical energy.

98. The insert of claim 94, wherein the injected energy comprises magnetic energy.

99. The insert of claim 94, wherein the injected energy comprises electromagnetic energy.

100. The insert of claim 94, wherein the injected energy comprises acoustic energy.

101. The insert of claim 94, wherein the injected energy comprises vibrational energy.

102. A method of radially expanding and plastically deforming a first tube having first threads, and a second tube having second threads, comprising:

coupling the first threads to the second threads to form a threaded connection; and

radially expanding and plastically deforming the coupled first and second tubes and forming a metallurgical bond between the first and second tubes.

103. The method of claim 102, wherein coupling the first threads to the second threads comprises placing an insert material within the threaded connection.

104. The method of claim 103, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

105. The method of claim 102, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

106. The method of claim 105, wherein the preexisting structure comprises a wellbore casing.

107. The method of claim 105, wherein the preexisting structure comprises a pipeline.

108. The method of claim 105, wherein the preexisting structure comprises a structural support.

109. An expandable tubular liner comprising a first tube having first threads, and a second tube having second threads coupled to the first threads; wherein the first threads are metallurgically bonded to the second threads by the process of:

coupling the first threads to the second threads; and

radially expanding and plastically deforming the coupled first and second tubes.

110. The liner of claim 109, wherein coupling the first threads to the second threads comprises placing an insert material within the threaded connection.

111. The liner of claim 110, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the radial expansion and plastic deformation of the coupled first and second tubes.

112. An apparatus comprising a preexisting structure coupled to a tubular liner, the tubular liner comprising a first tube including first threads, and a second tube including second threads, wherein the tubular liner is coupled to the preexisting structure by the process of:

coupling the first threads to the second threads to form a threaded connection; and

radially expanding the coupled first and second tubes into contact with the preexisting structure and forming a metallurgical bond between the first and second tubes.

113. The apparatus of claim 112, wherein coupling the first insert to the first threads comprises placing an insert material within a portion of the threaded connection.

114. The apparatus of claim 113, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

115. The apparatus of claim 112, wherein the preexisting structure comprises a wellbore casing.

116. The apparatus of claim 112, wherein the preexisting structure comprises a pipeline.

117. The apparatus of claim 112, wherein the preexisting structure comprises a structural support.

118. The method of claims 75 or 83, wherein injecting energy into the insert during the radial expansion and plastic deformation of the first and second tubes comprises:

increasing a coefficient of friction between the first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

119. The method of claims 75 or 83, wherein injecting energy into the insert during the radial expansion and plastic deformation of the first and second tubes comprises:

injecting localized thermal energy into the first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

120. A method of radially expanding and plastically deforming a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, comprising:

radially expanding and plastically deforming the coupled first and second tubes; and

injecting energy into the coupled first and second tubes to form a metallurgical bond between the first and second tubes.

121. The method of claim 120, wherein the energy is injected into the coupled first and second tubes prior to the radial expansion and plastic deformation of the first and second tubes.

122. The method of claim 120, wherein the energy is injected into the coupled first and

second tubes during the radial expansion and plastic deformation of the first and second tubes.

123. The method of claim 120, wherein the energy is injected into the coupled first and second tubes after the radial expansion and plastic deformation of the first and second tubes.

124. The method of claim 120, wherein the energy is injected into the coupled first and second tubes prior to and during the radial expansion and plastic deformation of the first and second tubes.

125. The method of claim 120, wherein the energy is injected into the coupled first and second tubes during and after the radial expansion and plastic deformation of the first and second tubes.

126. The method of claim 120, wherein the energy is injected into the coupled first and second tubes prior to and after the radial expansion and plastic deformation of the first and second tubes.

127. The method of claim 120, wherein the energy is injected into the coupled first and second tubes prior to, during, and after the radial expansion and plastic deformation of the first and second tubes.

128. The method of claim 120, wherein coupling the first and second tubes comprises placing an insert material between the overlapping ends of the first and second tubes.

129. The method of claim 128, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the injection of energy into the first and second tubes.

130. The method of claim 120, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

131. The method of claim 130, wherein the preexisting structure comprises a wellbore casing.

132. The method of claim 130, wherein the preexisting structure comprises a pipeline.

133. The method of claim 130, wherein the preexisting structure comprises a structural support.

134. The method of claim 120, wherein the injected energy comprises thermal energy.

135. The method of claim 120, wherein the injected energy comprises mechanical energy.

136. The method of claim 120, wherein the injected energy comprises electrical energy.

137. The method of claim 120, wherein the injected energy comprises magnetic energy.

138. The method of claim 120, wherein the injected energy comprises electromagnetic energy.

139. The method of claim 120, wherein the injected energy comprises acoustic energy.

140. The method of claim 120, wherein the injected energy comprises vibrational energy.

141. An expandable tubular liner comprising a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, wherein overlapping ends of the first and second tubes are metallurgically bonded by the process of:

coupling the overlapping ends of the first and second tubes;

radially expanding and plastically deforming the coupled first and second tubes; and

injecting energy into the coupled first and second tubes.

142. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes prior to the radial expansion and plastic deformation of the first and second tubes.

143. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

144. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes after the radial expansion and plastic deformation of the first and second tubes.

145. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes prior to and during the radial expansion and plastic deformation of the first and second tubes.

146. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes during and after the radial expansion and plastic deformation of the first and second tubes.

147. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes prior to and after the radial expansion and plastic deformation of the first and second tubes.

148. The liner of claim 141, wherein the energy is injected into the coupled first and second tubes prior to, during, and after the radial expansion and plastic deformation of the first and second tubes.

149. The liner of claim 141, wherein coupling the overlapping ends of the first and second tubes comprises placing an insert material between the overlapping ends of the first and second tubes.

150. The liner of claim 149, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the injection of energy into the first and second tubes.

151. The liner of claim 141, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

152. The liner of claim 141, wherein the preexisting structure comprises a wellbore casing.

153. The liner of claim 141, wherein the preexisting structure comprises a pipeline.

154. The liner of claim 141, wherein the preexisting structure comprises a structural support.

155. The liner of claim 141, wherein the injected energy comprises thermal energy.

156. The liner of claim 141, wherein the injected energy comprises mechanical energy.

157. The liner of claim 141, wherein the injected energy comprises electrical energy.

158. The liner of claim 141, wherein the injected energy comprises magnetic energy.

159. The liner of claim 141, wherein the injected energy comprises electromagnetic energy.

160. The liner of claim 141, wherein the injected energy comprises acoustic energy.

161. The liner of claim 141, wherein the injected energy comprises vibrational energy.

162. An apparatus comprising a preexisting structure coupled to a tubular liner, the tubular liner comprising a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, wherein the tubular liner is coupled to the preexisting structure by the process of:

radially expanding the coupled first and second tubes into contact with the preexisting structure; and

injecting energy into the coupled first and second tubes to form a metallurgical bond between the first and second tubes.

163. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes prior to the radial expansion and plastic deformation of the first and second tubes.

164. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes during the radial expansion and plastic deformation of the first and second tubes.

165. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes after the radial expansion and plastic deformation of the first and second tubes.

166. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes prior to and during the radial expansion and plastic deformation of the first and second tubes.

167. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes during and after the radial expansion and plastic deformation of the first and second tubes.

168. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes prior to and after the radial expansion and plastic deformation of the first and second tubes.

169. The apparatus of claim 162, wherein the energy is injected into the coupled first and second tubes prior to, during, and after the radial expansion and plastic deformation of the first and second tubes.

170. The apparatus of claim 162, wherein coupling the overlapping ends of the first and second tubes comprises placing an insert material between the overlapping ends of the first

and second tubes.

171. The apparatus of claim 170, wherein the insert material comprises a material capable of increasing a coefficient of friction between the first and second tubes during the injection of energy into the first and second tubes.

172. The apparatus of claim 162, further comprising placing the coupled first and second tubes within a preexisting structure before radially expanding and plastically deforming the coupled first and second tubes.

173. The apparatus of claim 172, wherein the preexisting structure comprises a wellbore casing.

174. The apparatus of claim 172, wherein the preexisting structure comprises a pipeline.

175. The apparatus of claim 172, wherein the preexisting structure comprises a structural support.

176. The apparatus of claim 162, wherein the injected energy comprises thermal energy.

177. The apparatus of claim 162, wherein the injected energy comprises mechanical energy.

178. The apparatus of claim 162, wherein the injected energy comprises electrical energy.

179. The apparatus of claim 162, wherein the injected energy comprises magnetic energy.

180. The apparatus of claim 162, wherein the injected energy comprises electromagnetic energy.

181. The apparatus of claim 162, wherein the injected energy comprises acoustic energy.

182. The apparatus of claim 162, wherein the injected energy comprises vibrational energy.

183. A method of radially expanding and plastically deforming a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, comprising:

positioning an insert material between the overlapping ends of the coupled first and second tubes;

radially expanding and plastically deforming the coupled first and second tubes;

injecting energy into the coupled first and second tubes before, during, or after the radial expansion and plastic deformation of the first and second tubes to lower a melting point of at least a portion of the insert material; and

injecting thermal energy into the coupled first and second tubes to form a metallurgical bond between the insert material and at least one of the first and second coupled tubes.

184. An expandable tubular liner comprising a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, wherein overlapping ends of the first and second tubes are metallurgically bonded by the process of:

positioning an insert material between the overlapping ends of the coupled first and

second tubes;

radially expanding and plastically deforming the coupled first and second tubes;

injecting energy into the coupled first and second tubes before, during, or after the radial expansion and plastic deformation of the first and second tubes to lower a melting point of at least a portion of the insert material; and

injecting thermal energy into the coupled first and second tubes to form a metallurgical bond between the insert material and the first and second coupled tubes.

185. An apparatus comprising a preexisting structure coupled to a tubular liner, the tubular liner comprising a first tube, a second tube, and a mechanical coupling for coupling overlapping ends of the first and second tubes, wherein the tubular liner is coupled to the preexisting structure by the process of:

positioning an insert material between the overlapping ends of the coupled first and second tubes;

radially expanding and plastically deforming the coupled first and second tubes into engagement with the preexisting structure;

injecting energy into the coupled first and second tubes before, during, or after the radial expansion and plastic deformation of the first and second tubes to lower a melting point of at least a portion of the insert material; and

injecting thermal energy into the coupled first and second tubes to form a metallurgical bond between the insert material and the first and second coupled tubes.